



Launch Mission Execution Forecast

Mission: Falcon 9 NASA Crew-3

Issued: 9 Nov 2021 / 1030L (1530Z)

Valid: 10 Nov 2021 / 2058 - 2108L (11/0158 - 0208Z)



Forecast Discussion: High pressure centered across the southeastern US will continue to move east over the next day, bringing a few more clouds into the coast from the Atlantic. Similar conditions will continue into the Wednesday night launch window, with a little more moisture bringing a few more clouds and a passing sprinkle. The main weather concern for the primary launch window will be Cumulus Clouds.

The next storm system will move across the northern tier of the US late week, bringing another cold front through the eastern third of the US on Thursday and Friday. Deepening southerly flow ahead of this system will bring more clouds and a better chance for Atlantic showers, and possibly a storm, in the vicinity of the Spaceport for the backup window Thursday night. The main launch concerns for Thursday night will be Cumulus Clouds, Flight Through Precipitation, and the Surface Electric Field Rule.

A pre-frontal boundary will move through Florida late Friday into Saturday, accompanied by scattered showers Friday afternoon that will linger into the evening. Cumulus Clouds and Flight Through Precipitation will be the main launch concerns Friday night, but the threat for lightning storms in the area and the Surface Electric Field Rule will remain.

Launch Day	Probability of Violating Weather Constraints							
	20%	Primary Concerns: Cumulus Cloud Rule						
	Weather Conditions						Additional Risk Criteria	
	Weather:	None	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Visibility:	7 miles	Cumulus	Scattered	3,500	7,000	Ascent Corridor Recovery:	Low
	Temp/Humidity:	73°F / 65%	Cirrus	Scattered	30,000	35,000	Booster Recovery Weather:	Low
Liftoff Winds (200'):	100° 10 - 15 mph					Solar Activity:	Low	
24-Hour Delay	Probability of Violating Weather Constraints							
	40%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation, Surface Electric Field Rule						
	Weather Conditions						Additional Risk Criteria	
	Weather:	Isolated Showers	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Moderate
	Visibility:	7 miles	Cumulus	Scattered	3,500	10,000	Ascent Corridor Recovery:	Moderate
	Temp/Humidity:	74°F / 80%	Cirrus	Broken	25,000	30,000	Booster Recovery Weather:	Moderate
Liftoff Winds (200'):	190° 12 - 17 mph					Solar Activity:	Low	
48-Hour Delay	Probability of Violating Weather Constraints							
	40%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation, Surface Electric Field Rule						
	Weather Conditions						Additional Risk Criteria	
	Weather:	Isolated Showers	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Visibility:	7 miles	Cumulus	Scattered	3,000	12,000	Ascent Corridor Recovery:	Moderate
	Temp/Humidity:	73°F / 85%	Cirrocumulus	Broken	25,000	30,000	Booster Recovery Weather:	Low
Liftoff Winds (200'):	VRB 5 - 10 mph					Solar Activity:	Low	

Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.

Next Forecast Will Be Issued	As Needed
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